

~~34~~ ³⁷
34. A method according to claim ~~33~~ in which the large pore size zeolite comprises zeolite USY.

~~35~~ ³⁸
35. A method according to claim ~~34~~ in which the zeolite comprises a USY zeolite having a unit cell size from 2.420 to 2.455 nm, an alpha value of from 0.2 to 300 and a bulk silica:alumina ratio of at least 5.0 as the zeolite.

~~36~~ ⁴⁰
36. A method according to claim ~~32~~ ³⁶ in which the catalyst composition is formed as a fluidizable catalytic cracking catalyst capable of reducing the sulfur content of liquid cracking products of the petroleum feed, comprising fluidizable particles having a size ranging from about 20 to about 100 microns of USY zeolite having a unit cell size from 2.420 to 2.455 nm, an alpha value of from 0.2 to 300 and a bulk silica:alumina ratio of at least 5.0 which contains the vanadium within the interior pore structure of the USY zeolite in an oxidation state greater than zero.

~~37~~ ⁴⁰
37. A method according to claim ~~36~~ which contains from 0.2 to 5 weight percent, based on the weight of the zeolite, of the vanadium component.

Remarks

1.1. This is in response to the Office Action of 6 November 2001 (Paper No. 23) which was made non-final. All of the claims in the application were rejected.

1.2. The addition of claims 32 to 37 above is requested to define an aspect of the invention in further detail. These claims specify that the vanadium sulfur reduction component is added to the catalyst composition before calcining (see page 9, line 32) and actual use of the catalyst in the cracking process.

2.1. The first prior art rejection set out in the office action is based on U.S. 4,588,702 (Beck) in view of U.S. 4,944,864 (Kugler). The essence of the rejection is that Beck contains a general disclosure of the catalytic cracking of hydrocarbon feeds containing sulfur, using a suitable cracking catalyst. This much is not disputed. Neither is the fact that matrix may comprise inorganic oxides such as alumina and silica-alumina, as co-gels (column 18). Contrary to the Examiner's suggestion, however, Beck does not appear to